

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of:

Inventor(s): Marin Soljacic, Lene Vestergaard Hau, John D. Joannopoulos

For (title): USING ELECTRO-MAGNETICALLY INDUCED TRANSPARENCY IN
PHOTONIC CRYSTAL CAVITIES TO OBTAIN LARGE NON-LINEAR
EFFECTS**1. Type of Application**

- ☒ Utility
☐ Design

2. Small Entity

- ☒ Yes
☐ No

3. Benefit of Prior U.S. Application(s) Under 35 U.S.C. §120

This application is a:

- ☐ Divisional
☐ Continuation
☐ Continuing Patent Application (CPA) under 37 C.F.R. §1.53(d)
☐ Continuation-in-part (CIP),

and hereby claims benefit under 35 U.S.C. §120 to the following applications:

| SERIAL NUMBER | FILING DATE |
|---------------|-------------|
| | |

4. Benefit of Non-U.S. Application Under 35 U.S.C. §119(a)-(d)

This application claims priority under 35 U.S.C. §119(a)-(d) to the following foreign application(s) and/or inventor certificate(s):

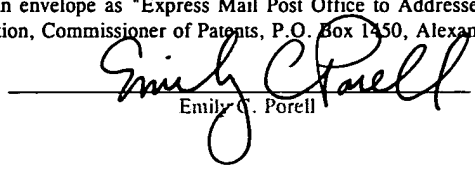
| COUNTRY | APPLN. NUMBER | FILING DATE |
|---------|---------------|-------------|
| None | | |

Certified copy(ies) of the application(s) and/or inventor certificate's from which priority is claimed:

- ☐ is(are) attached;
☐ will follow.

CERTIFICATE OF EXPRESS MAIL UNDER 37 C.F.R. §1.10

I hereby certify that this New Application Transmittal and the documents referred to as enclosed therein are being deposited with the United States Postal Service on **December 3, 2003** in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number **EV303918206US** addressed to the: Mail Stop Patent Application, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


 Emily C. Porell

5. **Benefit of Provisional Application Under 35 U.S.C. §119(e)**

This application claims priority to the following provisional application(s):

| SERIAL NUMBER | FILING DATE |
|---------------|-------------|
| 60/430,957 | 12/04/2002 |

6. **Papers Enclosed Which Are Required For Filing Date Under 37 C.F.R. §1.53**

37 Pages of Specification, including cover sheet, claims, and abstract
6 Sheets of Drawing

7. **Additional Papers Enclosed**

- ☐ Declaration and Power of Attorney
☐ Preliminary Amendment
☒ Information Disclosure Statement (37 CFR 1.98), Form PTO-1449 and a copy of each cited reference
☐ Assignment and Form PTO-1595
☐ Declaration of Biological Deposit
☐ Submission of "Sequence Listing" computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequences.
☐ Other _____

8. **Application Filing Fee Calculation**

A. ☒ Utility Application

FEE CALCULATION:

Total Claims: 18 - 20 = 0 × \$18 = \$
Independent Claims: 2 - 3 = 0 × \$86 = \$
Basic Fee: \$770.00
Multiple-Dependent-Claim Fee : \$

Total of the Above Calculations: \$770.00

- ☐ Amendment canceling extra claims enclosed.
☐ Amendment deleting multiple dependencies enclosed.
☐ Fee for extra claims is not being paid at this time.

B. ☐ Design application - \$320 \$
Application Filing Fee Sub-Total \$

C. ☒ Less 50% reduction for small entity..... \$385.00

D. ☐ Non-English Specification - \$130..... \$

TOTAL FILING FEE \$ 385.00

9. **Payment**

☒

Enclosed

☒

Check in the amount of the Total Filing Fee set forth above.

☐

Charge Account No. 19-0079 in the amount of Total Filing Fee set forth above. A duplicate of this transmittal is attached.

☐

Not Enclosed

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§1.16 and 1.17 that may be required by this paper or any paper filed in connection with this Patent Application, or refund any overpayment to our Deposit Order Account No. 19-0079.

Respectfully submitted,

Pat. Appl. by No. 47259

Matthew E. Connors

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